

# **EXHIBIT 16**

# ISSUES IN COMPETITION LAW AND POLICY

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## Volume I

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## Chapter 31

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# NATURAL EXPERIMENTS

Mary Coleman and James Langenfeld\*

“Natural experiments” are frequently used in economic research, and some have advocated the increased use of such analyses in antitrust cases—including merger cases. A natural experiment systematically compares market outcomes between two markets, one being a control group (unaffected by the behavior at issue) and another that should be affected by the behavior. When properly done, natural experiments can provide important insights and allow economists to draw relevant conclusions. As in other economic analyses, natural experiments analyses are only useful, however, if (1) they reasonably fit the facts of the case, (2) employ sound economic methodologies that are based on reliable information, and (3) the inferences are accurately drawn from an appropriate economic model and other available evidence. These elements are at the heart of the criteria that courts are supposed to use to determine whether expert testimony should be heard under the *Daubert* test. This chapter describes the natural experiment methodology, explains how and why the *Daubert* criteria should apply to natural experiment analyses, and provides several examples of the use of these analyses.

## 1. Introduction

In evaluating antitrust liability or damages, economists often have either analyzed market structure and the nature of competition within a market or attempted to directly measure the impact of alleged anticompetitive acts. The former usually involves market definition based on the principles outlined in the 1992 *Horizontal Merger Guidelines*<sup>1</sup> and the calculation of market shares as a starting point in the analysis of market power. Directly measuring the impact of alleged anticompetitive acts often involves quantitative analysis of market outcomes before and after the alleged behavior, such as changes in price or output, while attempting to control for other market influences.

Economists have also used “benchmarks” or comparables in antitrust and other economic analyses to provide evidence on liability or damages for allegedly anticompetitive actions. These analyses usually compare the market outcomes from the alleged behavior to outcomes that are not affected by that behavior. The use of comparables is intended to control for many of the influences on a market that are not related to the actions at issue, and has been termed “natural experiment” analysis.<sup>2</sup> That

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\* LECG, LLC, and LECG, LLC and Loyola University Chicago, respectively. The authors were involved in some of the cases discussed in this chapter, as indicated below. The authors thank Greg Werden, Luke Froeb, David Scheffman, Michael Vita, and Jessica Delbaum for their comments on an earlier version of this chapter.

1. U.S. DEP’T OF JUSTICE & FEDERAL TRADE COMM’N, HORIZONTAL MERGER GUIDELINES § 1 (1992) (with Apr. 8, 1997 revisions to Section 4 on efficiencies), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,104.
2. As discussed below, other factors that could lead to higher prices still must be addressed in natural experiments, but a good natural experiment should in itself control for many of these other potential influences.

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